



MEMORANDUM

To: John S. Mangiaratti, Town Manager, Town of Acton, MA
From: Jason Novsam, Nelson\Nygaard
Date: July 10, 2019
Subject: South Acton Commuter Rail Parking Study, Summary Memorandum

Dear John S. Mangiaratti,

Please see this summary of process, findings, and recommendations for our South Acton Commuter Rail Parking Study. This memorandum is intended as a cover sheet to the presentation delivered on May 28, 2019. As such, no new analysis, key findings, or recommendations are contained herein. The intention of this memorandum is to:

- Summarize the project process
- Reiterate and provide a narrative around key findings as detailed in the prior presentation
- Summarize the recommendations presented and prioritize them into tiers
- Provide a response to the changes to parking policy recommended by SATSAC following the May 28 presentation

This memorandum and accompanying presentation represent the final deliverable for the South Acton Commuter Rail Parking Study.

Sincerely,

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WHY IS THIS PROJECT IMPORTANT?

South Acton Station is a high-ridership commuter rail station that serves commuters from both Acton and the surrounding region. The station's popularity and regional significance have created high demand for parking that existing parking facilities sometimes struggle to accommodate. This plan provides a policy and management framework for South Acton Station's parking supply intended to alleviate the pressures of high parking demand and better serve all Station users, including those who do not drive and park.

Existing conditions at South Acton Station have led to:

- Frustration among parking users who are unable to arrive early enough to get a spot
- A reserved parking program with limited space, resulting in the need for a lottery system to distribute spaces
- A series of underused remote lots with the potential for future growth given improved shuttle service

Given the constraints of South Acton's parking environment, it is important to consider the following parking tradeoffs:

- **Convenient** parking vs.
- **Cheap** parking vs.
- **Plentiful** parking

While a perfect environment would allow for the three key elements listed above in all cases, real-world parking scenarios force tradeoffs. Any given parking facility must choose to prioritize convenience, affordability, or supply of spaces. In South Acton's case, different users have different needs. Some make cheap parking their highest priority, while others care more about convenience or the availability of many spaces. This plan provides recommendations to better manage the available parking supply and provide these three elements to different user groups based on their varied preferences.

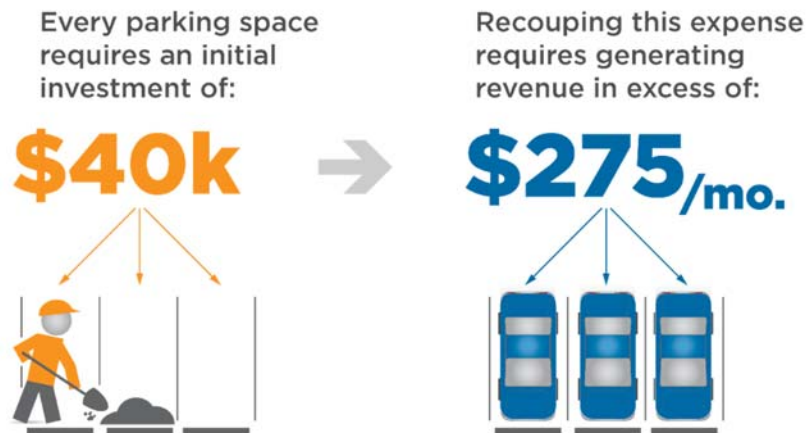
Figure 1 Parking Tradeoffs



KEY CONCEPTS

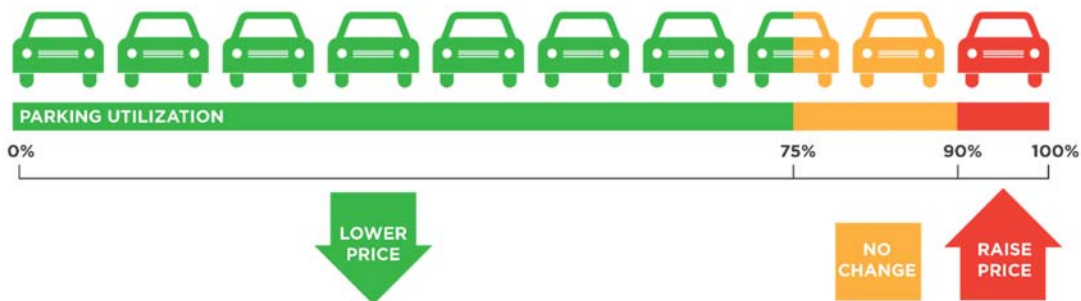
Parking is Expensive!

The construction of a new parking garage typically requires an investment of \$40,000 per space given current market conditions. Recouping this cost requires generating revenue in excess of \$275 per month over the lifetime of the facility. This revenue rate is unattainable in most environments, meaning that parking must be subsidized by the community.



Demand-Based Pricing

Parking is a commodity. As such, it should be priced to reflect supply and demand conditions as well as the quality of the parking product. Pricing for demand means adjusting parking rates based on the popularity of a given facility and the relative quality of that facility versus others in the system. Parking facilities that are completely full should increase rates to lower demand and achieve an equilibrium at a desired occupancy rate. 85% occupancy is a typical target occupancy as it represents a well-utilized lot that still has spaces which are relatively easy to find. Underused lots should have their rates lowered to increase demand.



Every Person Who Parks is a Pedestrian

While difficult parking conditions may stem from overutilized parking supply, management and enforcement issues, and other factors pertaining directly to parking, the broader transportation environment plays a critical role in the parking and access experience. Poor walking and biking conditions can deter users from parking and more distant lots and walking to their destinations. Excellent walking and biking facilities may incentivize users to stop driving and parking at all, thereby freeing up valuable parking spaces. This means that all aspects of the transportation network must be considered when evaluating parking conditions in constrained environment.

EXISTING PARKING CONDITIONS

South Acton Station – Commuter Rail Context

South Acton Station offers express train service not offered by adjacent stations on the Fitchburg Line. This creates a regional draw that increases parking demand. While many users do drive and park at the station, drop-offs by personal vehicle are common. An increasing number of users also bike or walk to the station. Shuttles from remote lots are also available, further expanding access options for users. These alternative modes are key to the Station's long-term access context and should be embraced.

Figure 2 Travel Mode to South Acton Station

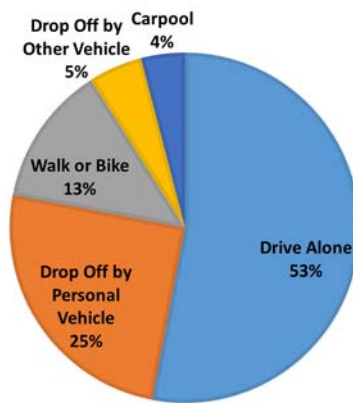


Figure 3 South Acton Commuter Rail Schedule

Monday to Friday				AM						
Inbound to Boston				400	402	404	406	408	492	410
ZONE	STATION	TRAIN #								
Bikes Allowed										
8	Wachusett	♂		4:50	5:45	6:20	6:40	7:10	-	8:10
8	Fitchburg	♂		4:58	5:53	6:28	6:48	7:18	-	8:18
8	North Leominster	♂		5:05	6:00	6:35	6:55	7:25	-	8:25
8	Shirley			5:13	6:08	6:43	7:03	7:33	-	8:33
8	Ayer			5:18	6:13	6:48	7:08	7:38	-	8:38
7	Littleton/Rte 495	♂		5:26	6:21	6:56	7:16	7:46	7:55	8:46
6	South Acton	♂		5:33	6:28	7:03	7:23	7:53	8:02	8:53
5	West Concord	♂		5:37	6:32	-	7:28	-	8:06	8:57
5	Concord			5:42	6:37	-	7:33	-	8:11	9:02
4	Lincoln			5:49	6:44	-	7:40	-	8:18	9:09
3	Silver Hill			-	f 6:47	-	-	-	f 8:21	-
3	Hastings			5:54	6:50	-	-	-	8:24	-
3	Kendal Green			5:57	6:53	-	7:47	-	8:27	9:15
2	Brandeis/Roberts	♂		6:01	6:57	-	7:51	-	8:31	9:18
2	Waltham	♂		6:05	7:01	-	7:55	8:13	8:35	9:22
1	Waverley			6:10	7:06	-	8:00	-	8:40	9:27
1	Belmont			6:13	7:09	-	8:03	-	8:43	9:30
1A	Porter Square	♂		6:18	7:14	7:31	8:08	8:22	8:48	9:35
1A	North Station	♂		6:29	7:25	7:42	8:19	8:33	8:59	9:46

Trains in purple box indicate peak period trains.

Existing Parking Inventory

South Acton Station currently offers a total of 511 parking spaces for commuters. The largest number of these (41%) require an Acton Resident Sticker. An additional 19% are metered, while 19% more are reserved for individuals on a monthly basis. 8% more are contained in remote lots that offer shuttle service to the Station. The remainder are short term parking, free parking, or dedicated to associated playground and park uses and unavailable to commuters.

Figure 4 Parking Inventory by Regulation

Parking Type	Parking Spaces	ADA Spaces	% of Total
4 Hour Parking	15	2	3%
Metered, \$5 Daily	106	0	19%
Minutevan Tag	45	0	8%
Open, No Overnight	30	2	6%
Playground Only	18	0	3%
Reserved	106	2	19%
Resident Sticker	224	9	41%
Commuter Total	511	15	94%
Grand Total	544	15	100%

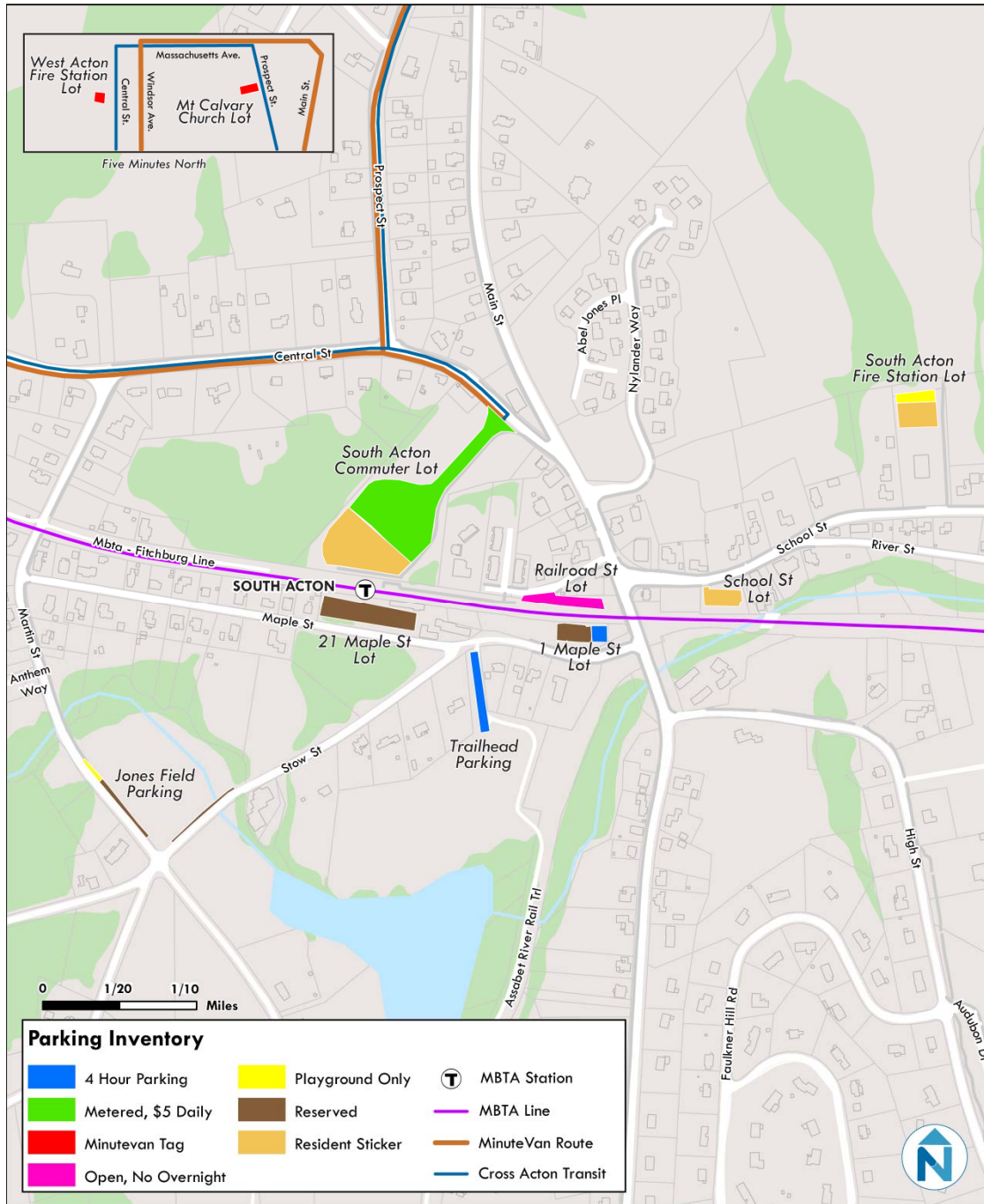
On a facility basis, most spaces are contained in the main South Acton Commuter Lot. About half of the spaces in this lot are metered, while the other half require a Resident Sticker. Other primary lots like the South Acton Fire Station, Maple Street Lot, and Railroad Street lot are smaller but remain clustered near the station. Remote lots are located at Mount Calvary Church and at West Acton Fire Station. The Town recently acquired the private parking lot at 21 Maple Street, which currently offers reserved parking and will continue to do so, in some form, under Town management. The map on the following page displays all of these facilities. All parking facilities were mapped and counted in the field to ensure accuracy.

Figure 5 Parking Inventory by Facility

Name	Regulation	Parking Spaces	ADA Spaces	% of Total	Notes
1 Maple Street	Reserved	28	2	5%	No overnight
1 Maple Street 4 Hour	4 Hour Parking	4	0	1%	No overnight
21 Maple Street	Reserved	40	0	7%	Currently private
Jones Field Playground	Playground Only	9	0	2%	
Jones Field Reserved	Reserved	38	0	7%	
Mount Calvary Church	Minutevan Tag	22	0	4%	
Railroad Street	Open, No Overnight	30	2	6%	No overnight, No parallel parking Nov to Apr
School Street	Resident Sticker	25	1	5%	No overnight
South Acton Commuter Lot Metered	Metered, \$5 Daily	106	0	19%	4 Motorcycle, 4 EV Spaces
South Acton Commuter Lot Resident	Resident Sticker	169	7	31%	
South Acton Fire Station	Resident Sticker	30	1	6%	No overnight
South Acton Fire Station Playground	Playground Only	9	0	2%	No overnight
Trailhead Spaces	4 Hour Parking	11	2	2%	No overnight
West Acton Fire Station	Minutevan Tag	23	0	4%	No overnight

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Figure 6 South Acton Commuter Rail Parking Inventory



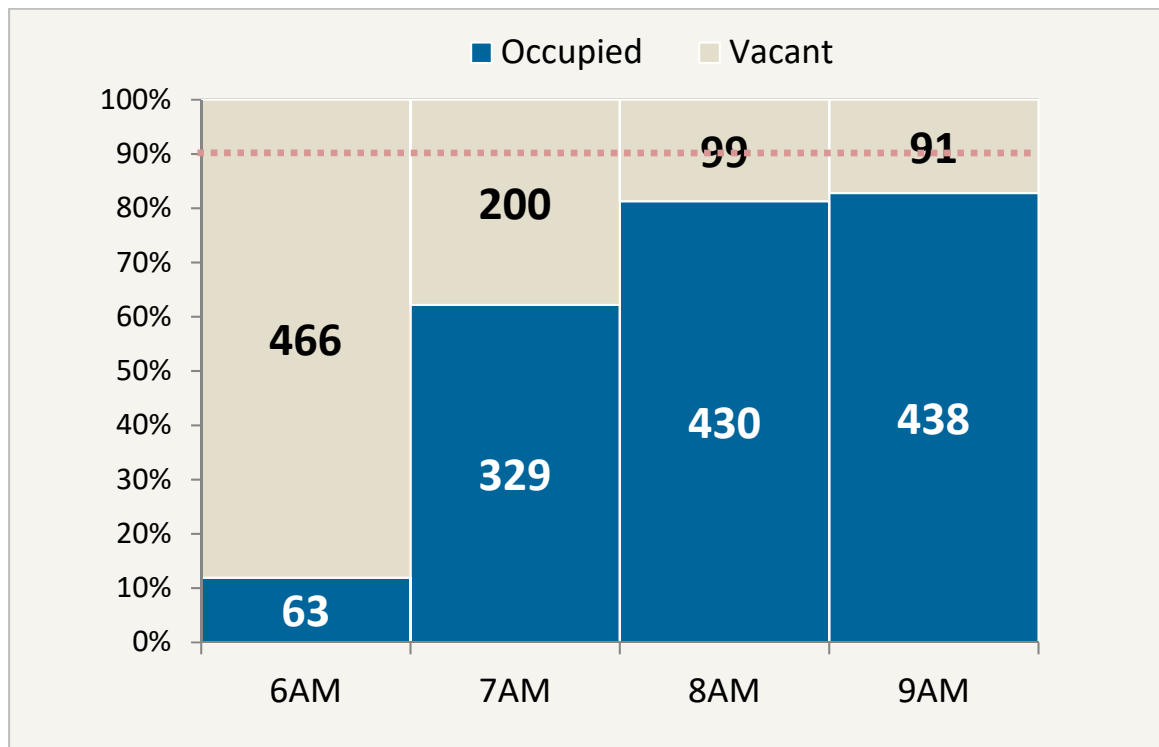
Existing Parking Utilization

Parking utilization indicates the relative demand for various parking facilities at various times of day. It also provides a systemwide benchmark for parking demand indicating broader management or supply issues. For this study, parking utilization counts were conducted in the field on Tuesday, May 14, 2019. Field teams counted all parked vehicles in all South Acton Station lots once per hour, on the hour, at 6 AM, 7 AM, 8 AM, and 9 AM. Counts were not conducted later in the day as these facilities are known to reach their maximum utilization by 10 AM once all morning commuter trains have passed.

The figure below displays the utilization of South Acton's parking supply throughout the collected time period. At 6 AM parking was only 11% full. By 7 AM, parking was already at 61% full. At 8 AM parking reached 82% full, while at 9 AM parking was only slightly more full at 83%.

Overall peak parking utilization of 83% indicates high demand for parking. However, 91 spaces still remained open at this peak. This means that opportunities exist to better manage parking and make more use of all available spaces. These opportunities can be revealed by breaking down overall parking utilization into utilization by regulation and by lot. The maps on the following pages show utilization for all facilities at each collected time period. These show that the main Commuter Lot fills up first, while other Resident Sticker lots fill up next.

Figure 7 South Acton Total Parking Utilization



Parking Utilization by Regulation

South Acton's parking utilization patterns reveal valuable insight into potential management and policy improvements when utilization is viewed by parking regulation. While overall parking is 83% full, Resident Sticker, metered, and free/open parking spaces are nearly 100% full. In contrast to this, reserved and remote lots were only 62% full. Playground and short-term parking spots located adjacent to the commuter rail facilities were mostly empty.

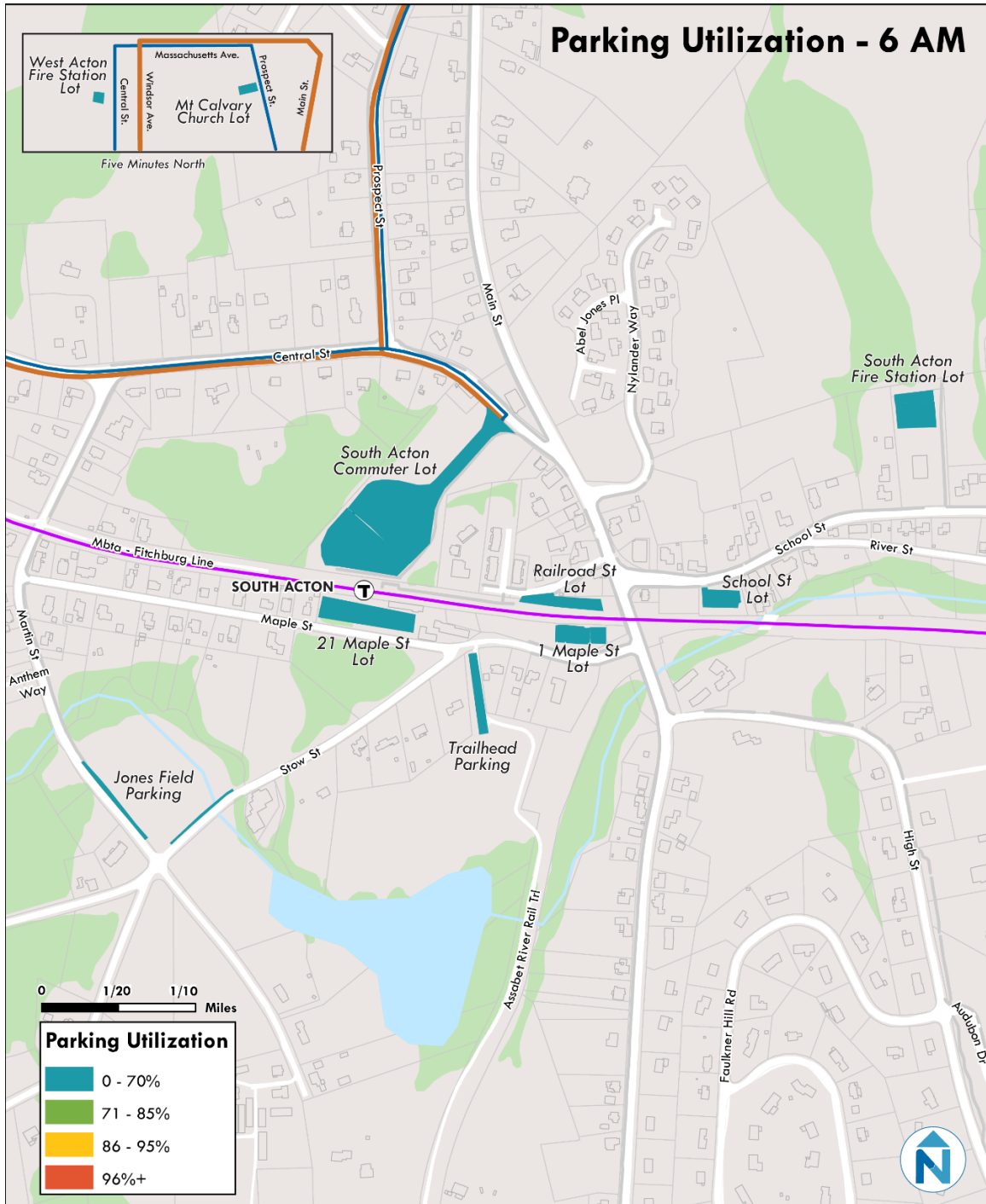
Frustration over parking extends from the fact that the main lot becomes completely full by 8 AM. Other users remain frustrated that reserved spaces are unavailable for purchase and distributed by lottery. However, utilization analysis reveals that parking spaces are still open at 9 AM in remote lots and among the reserved spaces. This means that parking demand can be better distributed to accommodate all users using the existing spaces which are unoccupied. Changes to management and supplemental programs such as shuttles and bike facilities can be used to enable optimal usage of the entire parking supply.

Figure 8 Parking Utilization by Regulation

Parking Type	Parking Spaces	ADA Spaces	% of Total	Utilization			
				6AM	7AM	8AM	9AM
Resident Sticker	224	9	41%	14%	89%	97%	98%
Metered, \$5 Daily	106	0	19%	8%	75%	97%	99%
Reserved	106	2	19%	5%	26%	57%	62%
Minutevan Tag	45	0	8%	0%	18%	60%	62%
Open, No Overnight	30	2	6%	64%	79%	100%	100%
Playground Only	18	0	3%	6%	11%	22%	6%
4 Hour Parking	15	2	3%	0%	0%	8%	15%
Grand Total	544	15	100%	12%	62%	81%	83%

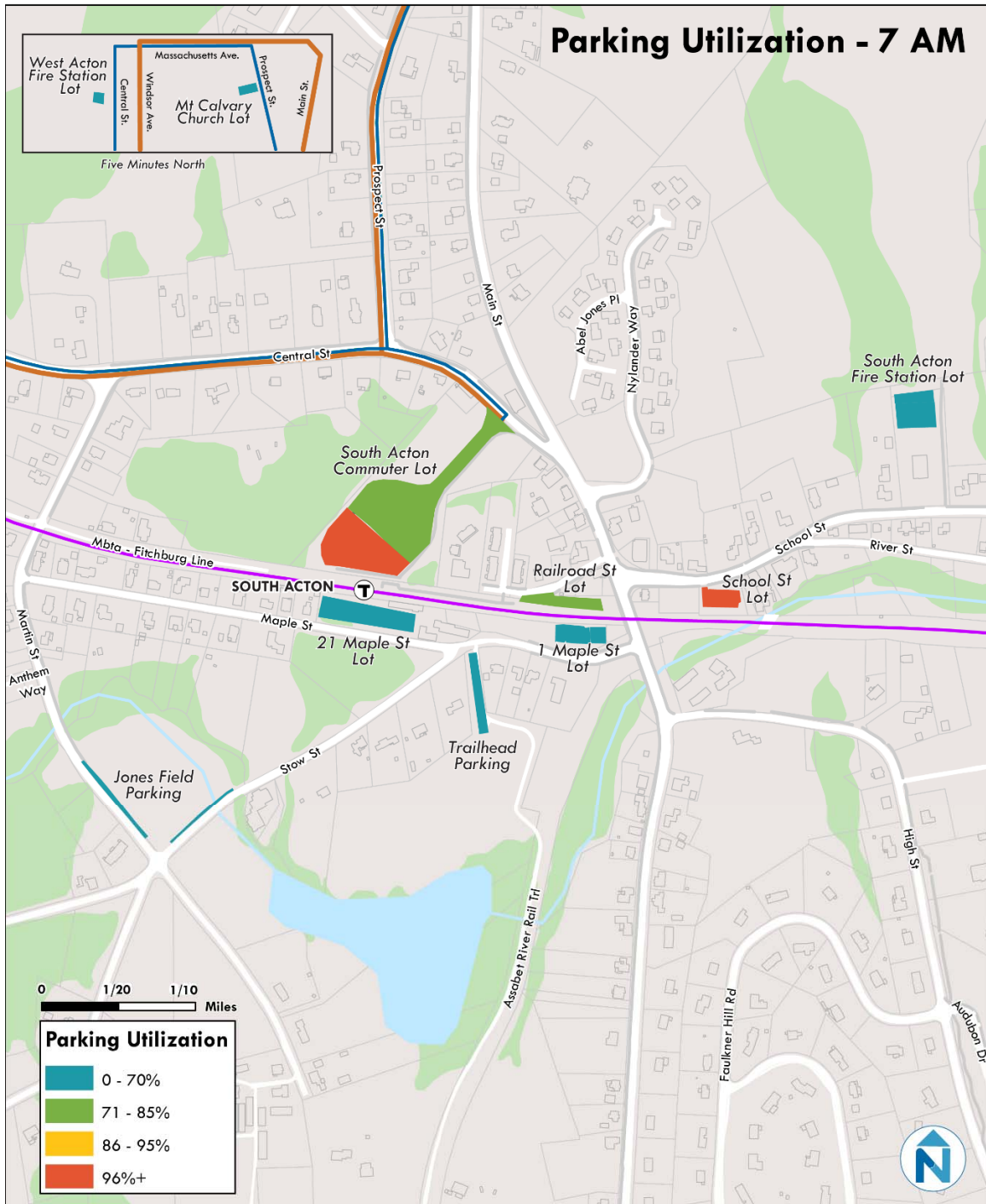
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Figure 9 South Acton Parking Utilization, 6 AM



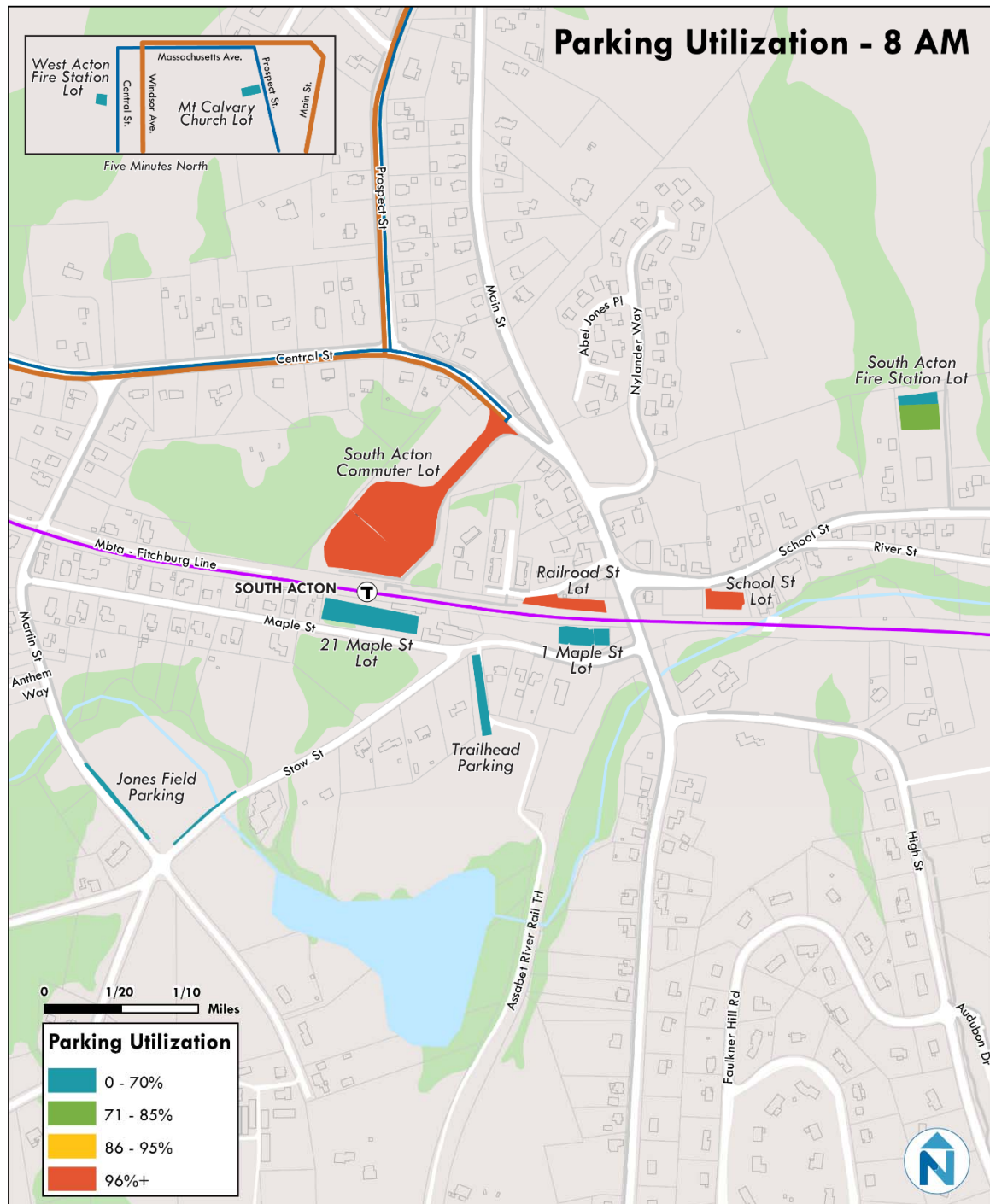
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Figure 10 South Acton Parking Utilization, 7 AM



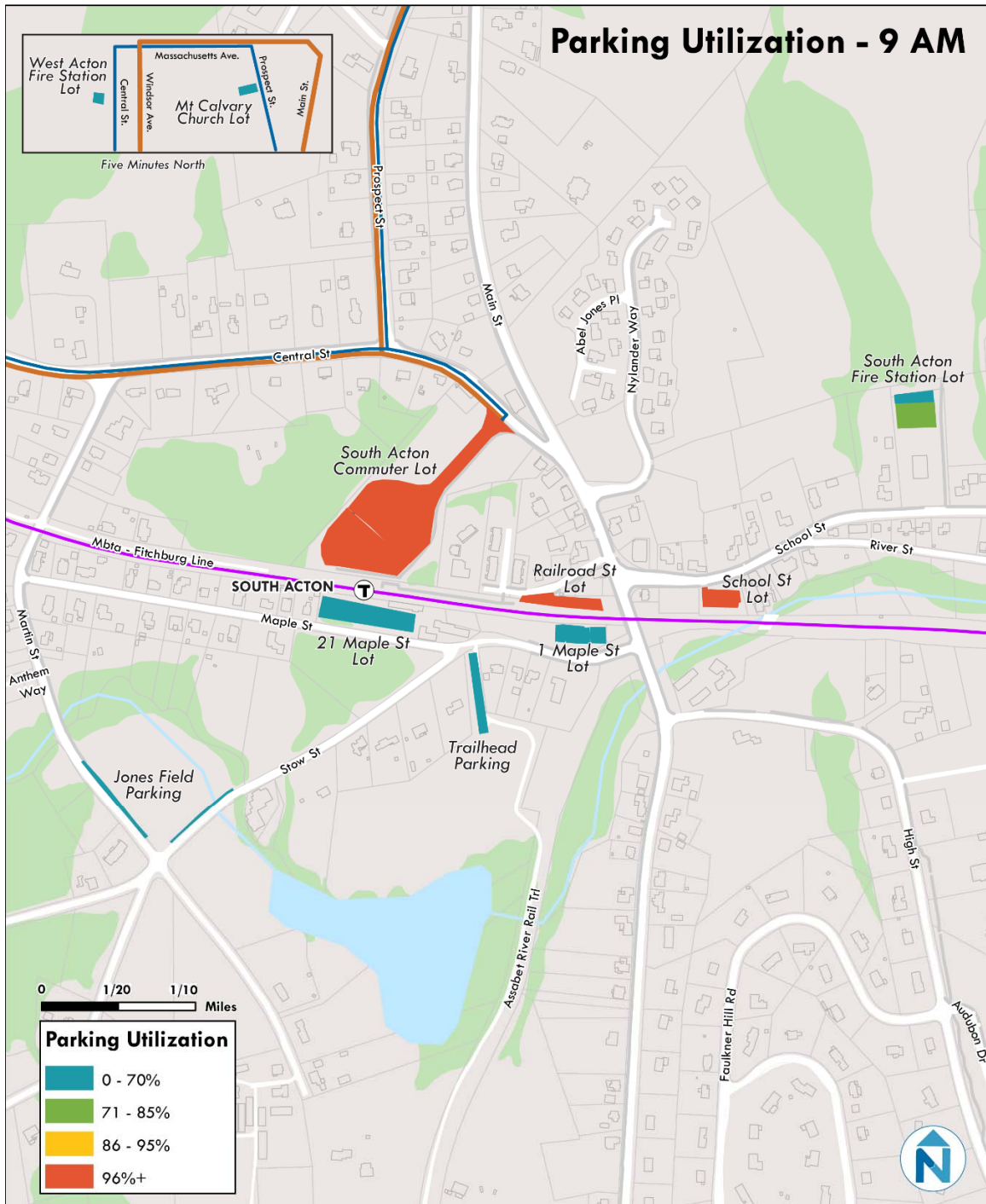
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Figure 11 South Acton Parking Utilization, 8 AM



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Figure 12 South Acton Parking Utilization, 9 AM



Programs, Policies, and Management

Rates and Payment Technologies

South Acton Station's parking system is governed by a variety of rates, payment technologies, and regulations. The largest number of spaces are held for Resident Sticker permit holders. These permits are purchasable at Town Hall or the Police Station at a rate of \$100 per year, or \$50 for seniors.

Reserved spaces are also available. These are purchased on a monthly basis at a rate of \$100 per month. Purchasing a reserved space give the user exclusive access to that space. Spaces are assigned to individuals upon purchase. These spaces are currently sold out and a lottery system is in place for their distribution.

Metered spaces are available in the main commuter lot at a rate of \$5 per day.

Remote lots provide multiple options. Day passes including parking and shuttle rides are \$3 per day. \$40 monthly passes and \$250 yearly passes are also available.

The existing structure of parking rates reveals a series of key issues:

- Resident Stickers are less expensive than annual passes for the remote lot despite being much more convenient.
- Resident stickers are provided on an annual basis and do not allow the flexibility of a daily rate system.
- Reserved spaces are priced at a rate that is in line with the daily metered rate despite their premium status.
- Reserved spaces are sold out and in high demand. However, they are not fully occupied on a daily basis, leading to a number of empty spaces despite the high overall demand for parking.
- The daily metered rate is cheaper than rates in Littleton and other towns despite the premium express service offered in Acton.
- Bike lockers are currently sold out, indicating a need to add more supply or increase rates.

Figure 13 Parking Rates and Management

Space Type	Payment Methods	Existing Rates
Resident Sticker	Purchase at Town Hall or Police Station	\$100 per year \$50 per year for seniors (65+)
Reserved	Reserved Permit Application (available online) for annual lottery	\$100 per month (3 month minimum)
Metered	Passport Mobile App Kiosk (Cash and Card)	\$5 per day
Remote Lot	Purchase from shuttle driver Mail order form (available online)	\$3 day pass with parking \$40 monthly pass with parking \$250 yearly pass with parking
Bike Locker	Contact Acton Municipal Department	\$100 per year \$14 per month

Reserved Space Program

The reserved space program is currently managed via lottery system and is sold out. 19% of all spaces in the parking system are held in the reserved program. 26% of these spaces are held by residents, while the remainder are held by non-residents.

The reserved space program presents a series of issues in its current form:

- High demand for these spaces has led to the creation of a lottery system, leading to frustration among users who feel they will likely lose their space.
- Spaces are underutilized on a daily basis despite being sold out. This indicates an opportunity to oversell the spaces in order to fill them more completely or shift to a daily system that does not rely on reserved spaces.
- The daily rate for the reserved spaces is not greater than the daily rate for meters despite the added convenience.

Resident Sticker Program

The resident sticker program covers the largest number of spaces in the Acton system. While only 224 of these spaces exist, 356 permit stickers were sold for 2019 as of the writing of this memorandum. This equals 1.6 stickers per space and means that some residents may be forced to park in metered spots due to the oversold permits. However, this may also be the result of individuals who purchase multiple permits due to the ownership of multiple vehicles.

Parking Pricing in Peer Towns

South Acton Station is part of the MBTA Commuter Rail system. As such, parking policies in other similar towns with MBTA Commuter Rail service are important benchmarks when

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evaluating Acton's parking. The figure below displays the parking rates for stations in peer towns in the MBTA system.

- Not all of these stations have town-controlled parking facilities. Some are managed by the MBTA.
- Acton's \$5 daily parking rate is roughly in line with most MBTA Commuter Rail stations. However, nearby Littleton charges \$6 and does not offer express service. This means that Acton can feasibly charge more than \$5 given its premium service.
- While all peer towns have some form of daily parking meter or daily rate, not all towns have monthly or annual pass systems.
- Acton's resident commuter permit is substantially cheaper than the monthly or resident permits of all other towns evaluated in this peer review.
- Most towns do not offer reserved parking. Only Belmont offers reserved parking the way Acton does, and at a much smaller scale.
- Mansfield implements a daily rate for all parking, but charges less for residents than non-residents. This may be a model for Acton in the future.

Figure 14 Parking Pricing in Peer Towns

City	South Acton	Littleton/ Rte 495	West Concord	Belmont	Sharon	Mansfield	Ballardvale	West Natick
Express to/from Boston	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Parking Capacity	544	226	146	131	542	806	120	178
Payment methods	App, Cash	App, Invoice	App	Card, Cash	App, Card	App, Card, Cash	App, Invoice	App, Invoice
Daily fee	Mon-Fri \$5	Mon-Fri \$6 Sat-Sun \$2	\$5	\$5	\$4	\$3 resident \$4 non-resident	Mon-Fri \$4 Sat-Sun \$2	Mon-Fri \$6 Sat-Sun \$2
Monthly / Annual Pass	-	\$105 per month	-	\$90 per month (reserved)	-	-	\$70 per month	\$105 per month
Managed by	Town	Republic Parking	Town	Town	Town	Town	Republic	Republic
Resident Commuter Permit	\$100 per year	-	\$150 per six months	-	\$135 per 3 months	\$20 + daily fee	-	-
Shuttle P+R	\$3 per day, \$250 annual	\$1.25 per trip	-	-	-	-	-	\$1.50 per trip

Shuttle Programs

Three shuttle programs serve the South Acton Commuter Rail Station:

- The MinuteVan / Acton Rail Shuttle
 - Offers AM and PM service, one trip per train, from Acton's remote parking lots to the station
- Cross Acton Transit
 - Offers fixed route service and runs once per hour to the station, all day
- The Maynard – Acton Rail Shuttle
 - Provides service from neighboring Maynard to the station, one trip per train, during AM and PM peaks

These programs provide critical service for South Acton commuters. Given the high demand for parking, remote lots are a necessary tool to increase the parking supply and mitigate demand at the main commuter lot. However, the current implementation of these services, particularly the crucial Acton Rail Shuttle, present some challenges to users:

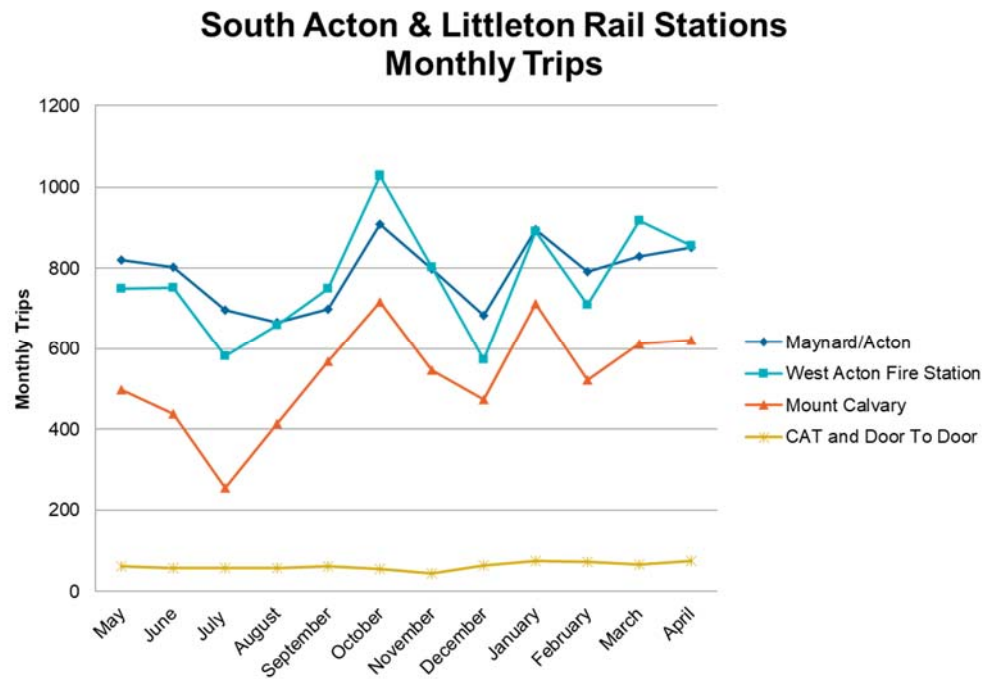
- The daily rate to park and ride on the Acton Rail Shuttle is greater than the cost of using a Resident Sticker in the main lot, despite being a much less convenient service.
- Acton Rail Shuttle users who use the daily pass must arrive and park, purchase and fill out a pass from the bus driver, then return to their cars and place the pass on the dashboard, before finally boarding the bus for departure. This is an inefficient system.

Given that parking spaces in the two remote lots served by the Acton Rail Shuttle are not full, more can be done to promote and streamline this service. Discounting the rate below the cost of the Resident Sticker or daily meter rates will incentivize more usage, as will shifting to a more streamlined payment structure. Furthermore, the Acton Rail Shuttle service can be expanded to serve remote lots in other areas of town to further incentivize usage. Monthly shuttle trip trends over time indicate that usage of shuttle services to South Acton Station is growing, indicating strong potential for future growth.

Figure 15 Rail Shuttle Services and Rates

Service	Schedule	Fare
Acton Rail Shuttle	M – F 6:45 AM – 9:25 AM 5:10 PM – 7:30 PM	\$1 per trip \$3 day pass with parking \$40 monthly pass with parking \$250 yearly pass with parking
Cross Acton Transit	M – F 8 AM – 6 PM	\$1 per trip
Maynard – Acton Shuttle	M – F 6:10 AM – 8:35 AM 4:45 PM – 7:41 PM	\$2 per trip

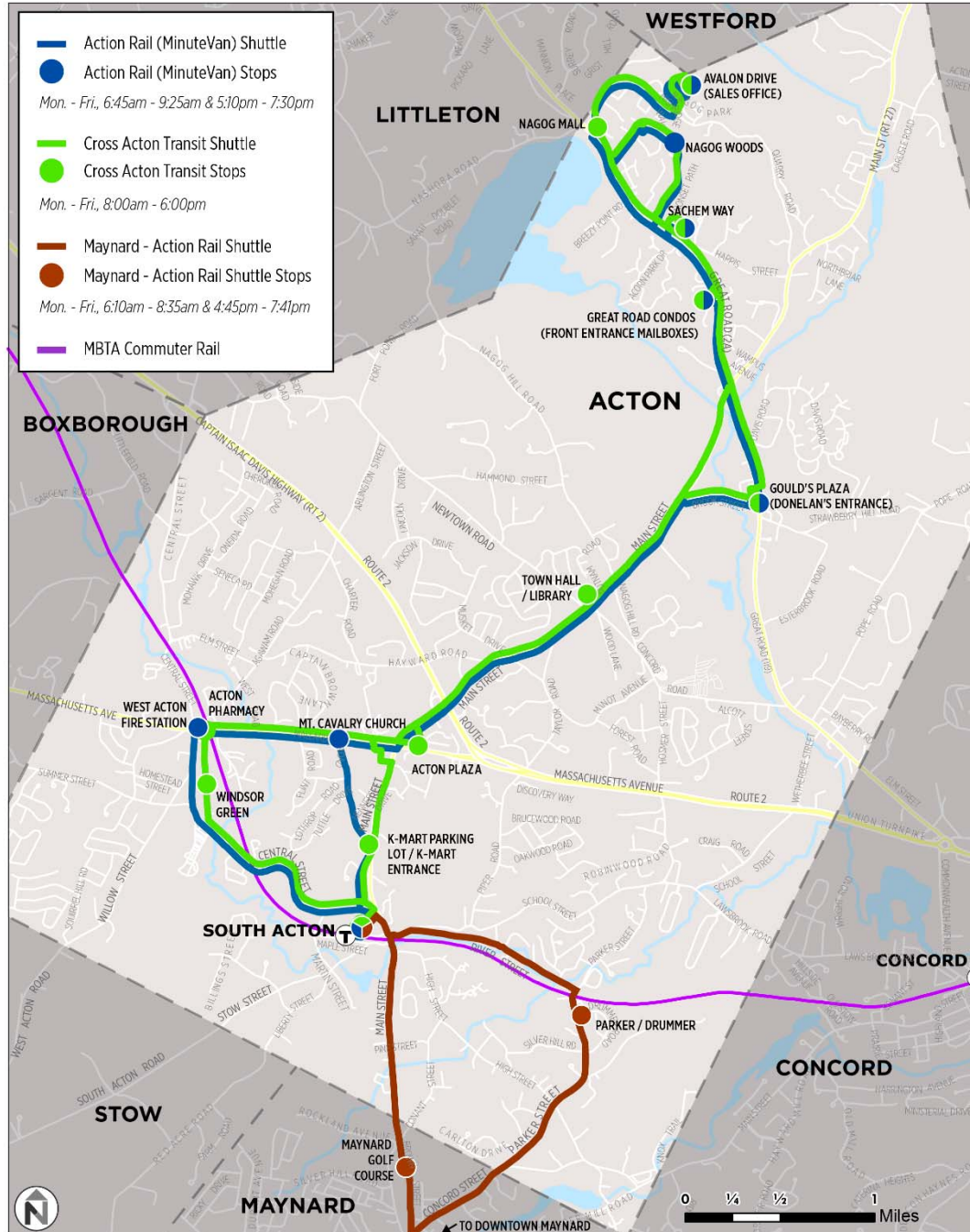
Figure 16 Monthly Trips on Rail Shuttle Services



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Figure 17 Shuttle Services to South Acton Station

South Acton Commuter Rail Station Transit and Shuttle Options



Bicycle Parking and Facilities

Formal bicycle parking utilization counts were not conducted for this study. However, public feedback and visual inspection of bicycle racks at South Acton Station indicates that bicycle parking is highly utilized. Bicycle facilities are an effective way to increase access to South Acton Station without expanding the vehicle parking supply; as such, additional bike racks and lockers should be added to South Acton Station to ensure that cyclists are not deterred from biking to the station.

Figure 18 Bicycle Parking at South Acton Station



Enforcement Practices

South Acton parking facilities are enforced every day by Acton staff. Metered spaces are pay-by-space, meaning that users must remember their space number before entering it into a kiosk or Passport app. Pay-by-plate service is not implemented. Pay-by-plate allows additional functionality for users and parking managers:

- Pay-by-plate means that users never have to remember space numbers and, when using Passport, never have to re-enter their information after their initial license plate entry.
- License-plate based enforcement is highly efficient and allows permits, daily rates, and other types of parking to be enforced in the same way.
- Pay-by-plate service offers opportunities to charge variable rates for residents and non-residents based on their status, since payment is tied directly to the vehicle rather than to a space number.

PARKING MANAGEMENT STRATEGIES

The high utilization of parking at South Acton station requires a shift in management strategies, as well as consideration of demand-management techniques and future supply expansions. The following strategies were developed as a part of the South Acton Commuter Rail Parking Study process and were vetted as part of the public meeting held on May 28th. The Town of Acton's leadership and members of the South Acton Train Station Advisory Committee (SATSAC) reviewed these strategies and developed an initial set of parking recommendations for implementation by the Town. These SATSAC recommendations are discussed directly in the SATSAC Initial Recommendations section of this memorandum.

Tier 1 Strategies

Tier 1 strategies represent recommended immediate next steps to improve parking conditions at South Acton Station. These strategies are focused primarily on pricing and management. Some of these strategies may be replaced in the future by later tier strategies.

Revise Pricing Under Current Structure

South Acton's parking pricing is not in line with best practices in parking management or with the pricing schemes of peer towns in the MBTA system. The following rationale should be applied to parking prices in Acton for immediate implementation:

- Acton's parking pricing should reflect regional trends in MBTA Commuter Rail parking pricing
- Residents should pay less per day than non-residents
- Core area spaces should be more expensive than remote lots
- Reserved spaces should be the most expensive due to their premium nature

The following key actions were developed with this in mind:

1. Increase resident permit rates to fall more in line with peer towns. Acton's permits are currently inexpensive in comparison.
2. Increase daily metered rates to match or slightly exceed neighboring towns like Littleton due to premium express service. Rates may be set at \$6+.
3. Reduce the daily rate for remote lots with parking and shuttle. This rate should be well below the daily cost of a resident sticker or daily meter.

Improve the Implementation of the Reserved Space Program

The reserved space program is highly valued by South Acton Station users. However, its current implementation leads to underuse of critical parking spots and creates dissatisfaction among potential users who are subject to a lottery system and lengthy waiting list. The following objectives should be applied when revising the reserved space program:

- Reserved spaces are highly valuable. Ideally these spaces will be highly utilized on a daily basis. An availability goal of 85% is appropriate.
- Reserved spaces are a premium service in comparison with regular metered or resident sticker spaces. As such, they should cost significantly more on a daily basis.

- Waiting lists and lotteries create frustration. Users who do not make regular use of their reserved space should be removed from the program so others may use these key spaces.

Key actions items to achieve these goals are:

1. Increase the monthly rate for reserved spaces so that they are more expensive than the daily meter rate. A rate of \$150 per month would equate to a rate of \$6.90 per work day over the course of a year.
2. Permit spaces can be oversold on an incremental basis to achieve higher daily utilization.
 - a. Begin by selling 5% more permits than there are spaces.
 - b. Monitor utilization to see that reserved spaces do not go above 85% utilization.
 - c. If utilization does not reach 85%, sell 5% more permits.
 - d. Continue to monitor utilization and oversell as necessary. If utilization goes above 85%, remove the last allowed permit holders until utilization falls back to acceptable levels.
3. Monitor individual usage of the reserved spaces by tracking license plates, either manually or with license plate reader technology. Users who do not use their reserved space at least 10 times a month should be removed from the program to allow room for others.

Add More High-Quality Bicycle Parking

South Acton Station's bicycle parking facilities are highly utilized and some users report an inability to find adequate parking during popular times. Acton should expand available bike parking, including additional bike lockers and covered parking that is more desirable. Key action items to expand bicycle parking are:

1. Conduct a bicycle parking utilization count to identify what areas are most in need of additional bike parking.
2. Ensure that adequate parking is provided on both sides of the Fitchburg Line tracks.
3. Work with vendors to purchase and install additional parking.
4. Continue to monitor bicycle parking utilization and expand as necessary.

Tier 2 Strategies

Tier 2 strategies are intended to supplement the Tier 1 strategies and further refine and streamline Acton's parking management. These strategies may be implemented within a longer timeframe than the immediate actions of the Tier 1 strategies.

Implement LPR and Pay-by-Plate Technology

License plate reader (LPR) technology can streamline enforcement and allow Passport and kiosk parking systems to utilize a pay-by-plate rather than pay-by-space system. Pay-by-plate technology means that users do not have to remember space numbers when purchasing parking. After their first time entering their license plate, they will be able to quickly and easily purchase parking on demand. License plate readers mean that enforcement can quickly and easily identify parking offenders. They also allow tracking of additional metrics such as individual use of parking spaces. Benefits of this technology for Acton include:

- Streamlined enforcement
- The ability to track individual use of parking spaces more easily, particularly in the reserved program
- The ability to enforce the resident sticker permit program without actually checking stickers
- The ability to utilize pay-by-plate technology which can be easier to use after initial setup for users
- The ability to charge different daily rates for different users (resident vs. non-resident) across a shared set of parking spaces

Key action items to achieve these goals are:

1. Identify a vendor for LPR technology who can provide further guidance and pricing for the necessary equipment.
2. Purchase LPR equipment and update enforcement strategies to utilize the new methods.
3. Convert kiosks and Passport parking app to a pay-by-plate system to utilize the new LPR enforcement.
4. Expand kiosk / Passport systems to all South Acton Commuter lots to ensure that the system is integrated and payment is streamlined at all locations. Allow Passport payment at remote lots for shuttle use to streamline the shuttle programs.
5. Use LPR technology to monitor parking utilization at all lots, guiding future decision-making on rate adjustments and supply expansions.

Shift to a Daily Parking Rate Model

Daily parking rates ensure that users only pay for parking on the days when they actually use it. This flexibility can encourage individuals to utilize alternative modes more often since they know they can save money by doing so. The benefits of a daily parking rate model include:

- Flexibility for users that will encourage them to take alternative modes when possible as they no longer pre-pay for parking they do not use.
- The ability to merge daily metered spaces with dedicated resident permit spaces, as all spaces are now managed on a daily rate. Residents can still be charged a lower rate.
- Charging a daily rate makes it easier to charge different rates for different lots, even when those lots are used by individuals with resident permits. Different permits do not need to be created as the daily rates in individual lots can be set accordingly.

Key action items to implement a daily parking rate model are:

1. Implement LPR, pay-by-plate, and Passport technology at all lots.
2. Merge the resident sticker and daily meter spaces into one regulation group.
3. Set a lower daily rate for residents than non-residents. Set the resident daily rate in accordance with the previously established annual rate for the resident sticker.
4. Make the resident sticker free or cheap to reflect the new daily rate model.
5. Continue to adjust rates based on ongoing parking utilization monitoring. Increase rates on an annual basis for lots that are overutilized and drop rates for lots that are underutilized.

Expand the Shuttle Services to Serve More Users

South Acton Station's users expressed significant interest in using shuttle systems to reach the Station. Existing remote lots with shuttle services are underutilized. However, many individuals stated that the locations of existing shuttle stops and lots were not convenient to their homes. Future study should be conducted to determine the most viable areas for shuttle expansion. Goals for shuttle expansion include:

- Expand access to shuttle service to more commuter from both Acton and neighboring towns.
- Reduce demand for parking and avoid the need to construct highly expensive additional parking facilities.
- Reduce congestion and other impacts from vehicle circulation in the neighborhood surrounding the station.

Key action items to expand shuttle services are:

1. Conduct a shuttle service study to identify key areas that can benefit from shuttle access.
2. Identify public or private parking lots that can be established as new park and ride areas.
3. Identify the cost of expansion, including new vehicles and operators necessary.
4. Ensure that new shuttle services remain cheaper to use than the parking facilities located at the Station.

Tier 3 Strategies

Tier 3 strategies are intended as long-term improvements resulting in more significant overhauls of the parking system and the built environment. These strategies should be pursued over a longer timeframe and can be reevaluated based on the results of implementation of the Tier 1 and Tier 2 strategies. For example, if Tier 1 and 2 strategies are highly successful, Tier 3 strategies may not be necessary in the immediate future. Parking supplies should not be expanded until all other options are exhausted.

Improve the Pedestrian Environment Around the Station

Improvements to the pedestrian environment around the Station will incentivize commuters who live nearby to walk rather than drive to the Station while also improving the neighborhood for residents who are currently impacted by the high volume of traffic in the area during commuting times. Key actions to improve the pedestrian environment are:

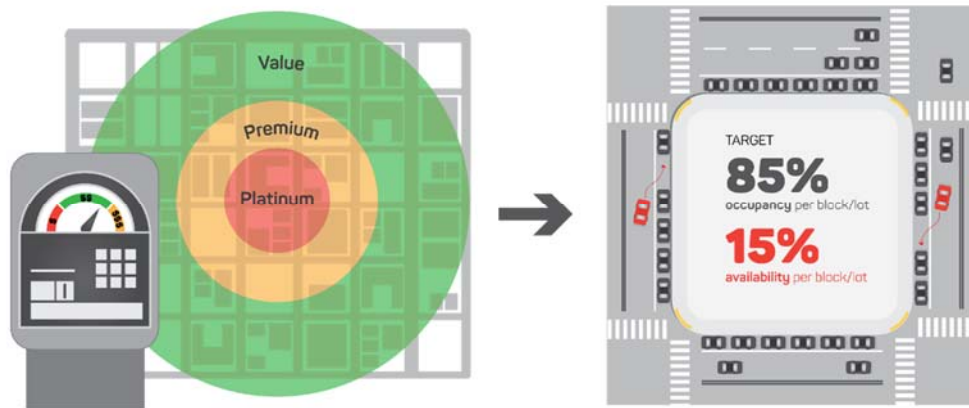
1. Identify the highest priority streets for new sidewalks within a 1-mile radius of the station.
2. Work with residents to prioritize street segments for sidewalk implementation
3. Expand the sidewalk network to cover all roadways within 1 mile of the station.
4. Implement high visibility crosswalks at all crossing within 1 mile of the station.

Shift all Parking to a Zone-Based, Daily Parking Rate

Daily parking rates that are zoned to charge the highest rates for the most convenient lots and the lowest rates for the most distant lots are the most effective way to price parking systems. Once daily parking rates are implemented for residents and non-residents in the main commuter lots,

the daily parking rate system can be expanded to all commuter lots. Reserved space programs and other specialty spaces can be eliminated completely. Instead, the closest lots (the South Acton Commuter Lot) will charge premium rates, while mid-tier lots (the South Acton Fire Station) charge medium rates, and remote lots (West Acton Fire Station) charge discount rates. Key action items to achieve this system are:

1. Implement Passport and LPR technology at all parking lots.
2. Eliminate reserved and other specialty programs.
3. Establish premium, standard, and discount parking rate zones.
4. Continue to charge less for residents than non-residents based on the new parking rate zones.
5. Continue to adjust rates based on ongoing parking utilization monitoring. Increase rates on an annual basis for lots that are overutilized and drop rates for lots that are underutilized.



Expand the Parking Supply with New Facilities

Parking supply expansion is highly expensive and produces additional impacts to surrounding neighborhoods due to additional congestion, unsightly new structures, and changes to the neighborhood character. Parking supplies should only be expanded once all other management options are exhausted. Regular utilization monitoring should be used to determine whether new parking facilities are truly necessary. Key action items to study and construct a new parking facility are:

1. Identify suitable locations for a new parking facility. In Acton's case, the existing commuter rail lot is the only likely candidate for parking supply expansion.
2. Identify the cost of construction of a new facility. Determine the revenue-per-space necessary to recoup costs of a new facility.
3. Study the potential impacts to neighborhood streets and intersections from the additional congestion induced by the new parking supply. Identify the necessary traffic mitigation measures to support the new traffic volumes.
4. Identify funding sources and the necessary debt service to construct a new facility. Federal transportation grants and partnerships with the MBTA are possible, but unlikely. Municipal bonds are the most common funding source for municipal parking facilities.

SATSAC INITIAL RECOMMENDATIONS TO TOWN OF ACTON

The Town of Acton's South Acton Train Station Advisory Committee (SATSAC) developed a set of recommended actions to improve South Acton Station parking conditions based on the recommendations provided by the South Acton Commuter Rail Parking Study team and feedback gathered at the public meeting held on May 28th. These recommendations are based on the strategies presented at the May 28th meeting and summarized in this previous section of this memorandum. However, they do not reflect all strategies devised by the parking study team and are merely an initial action set to be expanded upon in the future.

As of July 11, 2019, SATSAC and the Board of Selectmen recommend the following actions regarding commuter rail parking:

- Raise the daily metered parking rate from \$5 to \$6.
- Rate the rate for premium reserved spots from \$100/month to \$180/month.
- Raise the annual Resident Sticker price from \$100/year to \$200/year.
- Reduce remote parking and transportation cost to \$1/day, payable via Passport app only, or \$200 annual pass purchased via TransAction.
- Open Remote Parking Lots to Acton resident sticker holders.
- Change Jones Field from a reserved parking lot to a daily rate lot charging \$3/day payable via the Passport app.
- Maintain a lottery system for the remaining reserved spaces. Commuters will keep their spaces indefinitely once attained.
- If an applicant is offered a spot and declines they will be removed from the applicant pool

These initial recommendations fall roughly in line with the Tier 1 strategies proposed in this document and are endorsed by the South Acton Commuter Rail Parking Study team. However, the Town of Acton should continue to consider and pursue the other strategies outlined here. In particular, the following items will be of most value to Acton as the Town moves forward:

- Purchase of LPR technology and implementation of pay-by-plate
- Implementation of a daily rate for parking for all users of the existing resident and daily metered spaces, with residents charged a lower rate than non-residents
- Expansion of the shuttle programs to reach more individuals in Acton and neighboring towns
- Expansion of the remote lots once they become full
- Expansion of bike parking facilities